

WHAT IS CLAIMED IS:

- 1        1.        A ferrule attached to a terminal of an optical fiber, the ferrule  
2 comprising:  
3                a main body; and  
4                a leading end portion, integrated with the main body to serve as a  
5 convex lens such that light emitted from a core wire of the optical fiber is made  
6 to be parallel light, while incident light is focused onto the core wire.
  
- 1        2.        A ferrule attached to a terminal of an optical fiber, the ferrule  
2 comprising:  
3                a main body; and  
4                a convex lens, integrated with a leading end of the main body such  
5 that light emitted from a core wire of the optical fiber is made to be parallel light,  
6 while incident light is focused onto the core wire.
  
- 1        3.        The ferrule as set forth in claim 1, wherein at least the leading end  
2 portion is comprised of optically transparent resin.
  
- 1        4.        The ferrule as set forth in claim 1, wherein:  
2                the main body is formed with a hole into which the core wire is  
3 inserted such that a clearance is formed between a deepest portion of the hole  
4 and a leading end of the core wire; and  
5                the clearance is filled with filler such that the clearance serves as a  
6 light guide path.

1        5.        The ferrule as set forth in claim 4, wherein the filler is comprised of  
2        adhesive for fixing the optical fiber in the hole.

1        6.        The ferrule as set forth in claim 5, wherein a refractive index of the  
2        adhesive is selected so as to be greater than a refractive index of a material  
3        forming the leading end portion, and so as to have a refractive index difference  
4        corresponding to a numerical aperture of the core wire.

1        7.        The ferrule as set forth in claim 4, wherein the filler is comprised of an  
2        optically transparent gel.

1        8.        The ferrule as set forth in claim 7, wherein a refractive index of the gel  
2        is selected so as to be greater than a refractive index of a material forming the  
3        leading end portion, and so as to have a refractive index difference  
4        corresponding to a numerical aperture of the core wire.

1        9.        An optical coupling structure, comprising:  
2                a coupler, formed with a hollow portion in which leading end portions  
3        of ferrules each set forth in claim 1 are opposed to each other.

1        10.       An optical coupling structure, comprising:  
2                a coupler, formed with a hollow portion in which leading end portions  
3        of ferrules each set forth in claim 2 are opposed to each other.